about 6 percent for the most popular service and about 9 percent for the lowest price service after accounting for inflation.[6]

The relatively small increase in the rate per channel offered is especially notable in that virtually the entire increase in the number of channels offered on basic service over the period between 1986 and 1989 took the form of an increase in the number of basic cable networks, for which the operator generally made a payment, with little or no increase in the number of local or distant broadcast signals.

Between November 30, 1986, and December 31, 1989, the average number of channels received increased from 27.1 to 33.6 on the most popular basic service and from 24.2 to 31.2 on the lowest-price service. During this same period, the number of basic cable networks offered on the lowest-price tier increased from 11.1 to 17.3, accounting for virtually the entire increase in the number of channels offered. Moreover, this increase came on top of an increase from 7.8 to 11.1 between December 31, 1984, and November 30, 1986, so that the number of basic cable networks offered on the

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[6]Telecommunications, 1991 Survey of Cable Television Rates and Services, Report to the Chairman, Subcommittee on Telecommunications and Finance, Committee on Energy and Commerce, House of Representatives, July 1991. The House Report notes that "although average monthly rates for the lowest price basic service increased by 9 percent from December 1989 to April 1991, the average number of channels dropped by one....for the first time, cable consumers appeared to be spending more money on cable service and receiving less programming in return," [House Report, p. 33]. However, the number of channels on the most popular service actually increased during this period and the price per channel increased only slightly more rapidly than the rate of inflation.

lowest-price service had more than doubled over the five-year period from the end of 1984 to the end of 1989.[7]

If one were to compute the change in the subscriber rate per basic cable network offered between 1986 and 1989, one would obtain a large decrease, even before accounting for inflation.[8] One recent study concluded that, as a result of the deregulation mandated by the 1984 Cable Act, the quality of cable programming and cable distribution so improved that, even after accounting for higher basic rates, the gains experienced by consumers ranged between three and four billion dollars.[9]

It is unlikely that the FCC was completely aware of how repressive its regulations, or those of the local regulatory authorities, were or of how much value consumers placed on non-

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[7]The 1990 GAO Report does not provide a breakdown by type of programming for the most popular basic service and the 1991 Report does not provide a breakdown for either service.

[8]Of course, as the FCC has made clear, it is impossible, without information about costs, to determine whether a given price increase represents the exercise of market power or an improvement in service quality or both. [See, e.g., "Report In the Matter of Competition, Rate Deregulation and the Commission's Policies Relating to the Provision of Cable Television Service," MM Docket No. 89-600, Released July 31, 1990, para. 5.] This means that a comparison of cable rate increases with the rate of inflation that ignores changes in service offerings can be highly misleading for purposes of assessing the market power of cable operators. Indeed, there is a considerable literature devoted to developing a methodology for taking quality changes into account in order to measure "true" price increases. See, e.g., E. Berndt, The Practice of Econometrics (Boston: Addison-Wesley, 1991), pp. 102-150.

[9]J.R. Woodbury and K. Baseman, "Assessing the Effect of Deregulation on Cable Subscribers," Paper presented at the American Enterprise Institute Conference on Policy Approaches to the Deregulation of Network Industries, October 1990.

broadcast programming.[10] Indeed, despite the fact that cable consumers typically spend the bulk of their viewing time watching broadcast stations that can be received over-the-air, they are still willing to pay 12 billion dollars per year for the right to watch the less frequently viewed but (apparently) highly valued cable programs.

We urge the Commission, in framing its new regime that will govern the rates for basic and cable programming services, to recall how sensitive the availability of additional cable programming has been to restrictive regulations in the past. The wide array of viewing choices that consumers now have come to expect -- and the prospects of continued expansion of choice and of improved quality -- will likely be significantly affected by substantial changes in the rates that cable systems are able to charge. The Commission must take into account the effects on the programming that is available to the viewing public in formulating its policies for cable programming rates.

## PRINCIPLES FOR THE REGULATION OF BASIC RATES

A key goal of the Cable Act's mandated regulatory scheme is to produce basic cable rates that mimic those that would be charged if cable systems were subject to effective competition. One can identify a number of principles that should guide the Commission in

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[10]However, it may be incorrect to regard these policies as completely unintended "mistakes." For an oft-cited discussion of how regulators make decisions, see S. Peltzman, "Toward a More General Theory of Regulation," Journal of Law and Economics (1976), pp. 211-240.

attaining this goal through its regulation of basic service and equipment rates, as well as through its oversight of rates for cable programming services. These include the following:

1. The regulatory regime should take into account differences in the pre-regulation pattern of pricing across systems. Specifically, the definition of rates for both basic and cable programming services should account for differences in prices charged by those systems that "bundle" equipment with service and those that do not.

2. The regulatory regime should take into account factors that produce significant differences in costs among systems.

3. The regulatory regime should permit the adjustment of rates to external factors that change over time.

4. The regulatory regime should encourage cable operators to offer higher-quality basic and cable programming and distribution services.

5. The manner in which rates are regulated or scrutinized, and any adjustments in those rates over time, should be simple enough to be understood by consumers.

6. Because of the very large number of cable systems and franchises, regulations should permit low-cost monitoring and enforcement.

7. The regime should be flexible enough to avoid the kinds of costly errors that can be made even by well-intentioned regulators.

As one immediate application of these principles, consider the following: Because the costs of providing basic service vary substantially across systems and geographic areas (i.e., systems can be dramatically different from the average), a single rate that is applicable to all cable systems would probably not be appropriate. However, the desire to adopt rates that are tailored to the costs of each cable system should be tempered by the knowledge that the resulting complexity would add substantially to the administrative costs of regulation. Although the basic rate regulatory scheme should take into account some factors that cause differences in costs among systems, the preferred regulatory scheme is likely one that is more complex than one based on some simple national average, but not so complex as to involve enormous costs of regulation.

Defining the Basic Rate

Below we discuss why cost-of-service regulation should not be applied to cable subscriber rates and then suggest alternatives the Commission could consider. First, we first address the question of how to define the basic rate that will be regulated.

Any limits on basic cable service rates could focus either on "the" basic rate charged for the entire bundle of channels, or on a per-channel rate. If the Commission chooses the former, then any binding restriction on the total basic service rate may provide disincentives for the operator to incur the costs of enhancing the mix, level, or quality of basic service (as measured, for example,

by the amount of detail about basic service in program guides, by varying the signal quality of basic service, or by the choice of distribution technology).[11] No cable operator would be inclined to service reductions in a unregulated market, but profit imperatives in a regulated environment may compel such a reduction. The effect on the attractiveness of basic service may be akin to that of rent control on the attractiveness of rent-controlled housing. As one study noted:

> ...rent controls have led to the deterioration and in many cases outright abandonment of housing particularly in the inner city. As quality fell, rent-controlled housing became less and less of a 'good deal' for tenants, eventually becoming on balance a very bad deal well before any final abandonment.[12]

The tendency for regulation to induce this kind of consumer harm can be countered in a number of ways. One way, discussed below, is to use a lighter hand in monitoring rates for non-basic services, to create a "safety valve" for highly valued and expensive services that would not be carried at the regulated basic rates. However, this safety valve will still not solve the problem of discouraging cable operators from enhancing the mix, level, or quality of their basic tiers.

Instead of setting a single rate for basic service independent of the number of channels that are offered, the Commission could set a benchmark on a per-channel basis. In this case, as long as

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[11]A binding restriction is one that effectively constrains the behavior of the regulated firm.

[12]Woodbury and Baseman, op.cit., note 8, p. 10 , and sources cited therein.

the cost of providing a channel or other services on a per-channel basis is no greater than the price per channel permitted by the Commission, the operator will have some incentive to enhance its basic service offerings. Thus, we conclude that the Commission should define the rate to be regulated as the basic rate per channel, not the rate for the entire package of basic services. A related reason for regulating basic services on a per-channel basis is to not artificially penalize those systems that have more must-carry stations or Public, Educational, and Governmental Access channels (PEGs) than other systems.

A second issue the Commission must confront in its regulation of basic rates is how to treat consistently cable systems that currently offer services and equipment separately on an unbundled basis, and those that bundle equipment and services together.[13] Assume, for the moment, that the Commission has determined that the benchmark rate per channel is $1. If the Commission were simply to mandate that each system that was charging a rate in excess of that amount would have to lower its per-channel rate to $1 in order to charge a rate no higher than the benchmark, this would create substantial and artificial differences among systems and have serious financial consequences for some cable operators and their subscribers.

This problem arises because, currently, cable operators offer basic subscribers a package of services in addition to the basic

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[13]In fact, systems that currently bundle services and equipment do so in a variety of ways and the regulatory regime must deal with that fact.

programming service -- installation, remote control devices, converters, and service to additional outlets.[14] There are some cable operators who charge subscribers separately for each component of the package, and other operators who "bundle" one or more of the components in the price for basic service. Not surprisingly, a system that bundles will typically have a higher "basic service" rate (because it includes equipment costs) than an otherwise identical system that has unbundled basic service from equipment.

Suppose that cable operators are now told that they must unbundle equipment from service and must charge consumers only for the cost of equipment. A cable operator that had previously bundled service and equipment will now unbundle and (in the extreme case) lower the previous (bundled) price by the equipment cost. By contrast, an operator whose rates were already unbundled will (in the extreme case) wish to increase its basic rate by the difference between the per-subscriber revenues previously earned on equipment and the costs of that equipment. This is because the prices of cable service and equipment had previously been set interdependently. Because cable subscribership will be determined by both the price of basic service and the price of the equipment required to receive basic service, an operator who sets a relatively low price for basic service might choose a relatively high price for equipment, and vice versa.

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[14]Henceforth, we refer only to equipment, recognizing that this term is meant to refer to both equipment and additional services.

As a result of this rate realignment, the basic service rate for both systems will be identical. If this rate realignment were not allowed to occur before the imposition of basic rate regulation, however, two otherwise identical cable systems can have substantially different basic service rates simply because, before rate regulation, one had chosen to bundle services with equipment and the other had not.

Permitting systems to "reprice" basic service rates after imposing regulation on equipment rates is necessary both to achieve regulatory parity and to avoid significant adverse effects on those operators who had previously offered a relatively low price for basic cable services because service and equipment prices were unbundled. If "repricing" is not permitted, and operators are required to maintain or lower their unbundled rates, subscribers to their systems may be harmed because these operators will have a substantially reduced incentive to enhance the mix, level, or quality of their basic tiers compared to operators who had previously bundled service and equipment.

To make the previous point concrete, consider the case in which (i) equipment, say a remote control device, was offered on a bundled basis, i.e., it was provided with the basic service at no additional charge; (ii) the basic service charge was $15 per month; and (iii) the basic service consisted of 10 channels. In addition, suppose that the regulated rate for the remote control

device is $5 per month.[15] If all subscribers get a remote, this means that the cable system can be regarded as having charged $10, or $1 per channel, per month for basic cable service.[16] If this cable operator is forced to unbundle, it will (in the extreme case) charge a price of $10 for basic service and its total revenues will be unchanged.[17]

Now consider an otherwise identical system in which the rate for the 10-channel basic service was $7, but the remote control device was offered for a separate charge of $8 per month. Thus, a subscriber paid $7 if it did not take the remote and $15 if it did. Once again, assuming that all subscribers take the remote, the total revenues of this system and the system that bundled described in the previous paragraph are identical. If the regulated price of the remote were $5, this operator would have to increase the price of basic service to $10 to be in the same position as the operator who had previously offered services and equipment on a bundled basis.

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[15]Note that this, and all other calculations, accept the regulated rate for equipment without considering whether or not this rate actually reflects the cost of the equipment. We are concerned here only with how to determine the appropriate rate for basic cable service given the regulated rate for equipment.

[16]If all subscribers do not purchase the remote at the unbundled rate of $5, and if reregulation were to limit the basic service revenues to the costs of providing basic service and the accompanying equipment, the rate for basic service must exceed $1 per channel to ensure that the operator's revenues are unaffected.

[17]Its revenues will be reduced, of course, if the pre-regulation rates are higher than the benchmark rates.

If the regulated price of basic service were set at $.90 per channel but no system was permitted to reprice its basic service by increasing its per-channel rate, a serious inequity would arise. If the system offering bundled service offered cable service at $9 ($.90 per channel) and equipment at $5, its revenues would decline to $14 per subscriber. However, without the ability to reprice, the system offering unbundled service would be able to continue to charge only $7 for basic service and $5 for equipment, for total revenues of only $12 per subscriber.

To avoid this problem, prior to the application of the benchmark, the Commission could calculate the rate to be regulated as the total per-subscriber revenue per channel received from the provision of basic service and the accompanying equipment, less the regulated price of that equipment. In the example above, the Commission could calculate the pre-regulation basic service rate of the system offering unbundled services and equipment as ($7 + ($8-$5))/10, or $1 per channel.[18] This allows for the fact that the basic rate would have been higher than $7 if the price of equipment had previously been regulated at $5.[19] An alternative would be

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[18]A more dramatic example would occur for a system that charged only, say, $5 per month for basic service, choosing instead to obtain a large share of its revenues in the form of revenues from the lease of remote control devices. It would be inappropriate to limit such a system to 50 cents per channel while a system that differed only in that it had previously offered the remote control devices bundled with the service obtained a much higher rate per channel.

[19]The size of the adjustment will depend, of course, on the regulated price of equipment. The interdependence between the rates for basic service and equipment is similar to that between basic and pay services, which we discussed earlier.

to adjust the basic rate upward by $3 times the percentage of subscribers who actually took remote control devices at the unregulated price of $8.[20] These adjustments will tend to result in a regulated unbundled price for basic service that will not generate differences across otherwise identical systems as an artifact of how systems had marketed basic cable service prior to reregulation.

## THE COSTS OF COST-OF-SERVICE REGULATION

Over the past 25 years, there has been a growing awareness among economists and policymakers alike that conventional cost-of-service and rate-of-return regulation is a very imperfect tool to mitigate the costs of market failures. As a result, there has been a search for regulatory alternatives, reflecting

> a growing understanding that governmental regulation is limited in what it can accomplish. The firms that are the object of regulation are almost always better informed than regulators about their costs and the consequences of adopting particular, detailed regulatory schemes for prices or conditions of service. Thus, rather than creating regulation based on the premise of an omniscient regulator being able to set optimal prices based on full knowledge of costs and demand, a more realistic regulatory goal is to design incentive mechanisms for that regulated firm that will lead it to maximize society's

[20]The fact that a $1 adjustment may be excessive here is the counterpart of the fact that the $5 adjustment was inadequate in the case in which remote control devices had previously been bundled together with basic cable service.

objectives...while pursuing its self-interest.[21]

This section discusses the costs to society of cost-based and rate-of-return regulation, which we will refer to as traditional cost-of-service regulation. Some of these costs arise directly from the burdens imposed by the regulatory process itself. Others stem from the reactions of firms to an incentive system that constrains their overall profits by tying their prices to their own costs. When firms can adjust their prices to cover any increased costs, and are limited in the profits they can earn, their incentives to limit costs and to offer new services may be substantially reduced.

The Administrative Costs of Cost-of-Service Regulation

Under cost-of-service regulation, identifying the appropriate level of costs and profit is an extremely complex task, one that creates a tremendous administrative burden for regulators and regulated firms alike. Although significant resources are expended within regulatory agencies in an effort to identify, measure, and verify costs, including costs that the regulated firm incurs in complying with requests for information, regulators inevitably know far less about the regulated firm than the firm does itself.

If cost-of-service regulation is employed, regulators must determine what are allowable costs, the pace at which capital

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[21] J.P. Acton and I. Vogelsang, "Introduction: Symposium on Price Cap Regulation," RAND Journal of Economics (Autumn 1989), p. 369.

assets can be depreciated, and the appropriate profit level. In addition to establishing an appropriate rate level, regulators may also attempt to determine the rate structure they will permit. Extended proceedings may be required to resolve differences between the regulator and the regulated firms on all of these matters. In particular, there is likely to be wide disagreement regarding the cost of capital, the need to attract capital to the industry, and the return necessary to compensate for the riskiness of the business. As the Commission is surely aware, application of even its abbreviated proposed accounting requirements for cable systems would prove to be both onerous and controversial.

Monitoring and verifying the costs of the large number of heterogeneous cable services will amplify the scope and intensity of these regulatory disputes. The costs of resolving these disagreements on a franchise-by-franchise basis for more than 10,000 cable systems and 33,000 franchises would surely be breathtakingly large.

These administrative costs loom even larger when regulating a rapidly changing industry, like cable television, that offers an increasingly diverse selection of services. With the introduction of digital video compression technology, expectations are that the cable industry will offer subscribers "a large array of <u>à la carte</u> services, interactive programming guides, narrow niche services" and 500 to 600 channels.[22] The difficulty of identifying and

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[22]See "TCI: $200 Million for Channel Explosion," <u>Broadcasting</u>, December 7, 1992, p. 4.

assigning costs to the various services that such a system would offer and that will change over time would be certain to result in regulatory proceedings that create significant lags in the introduction of new services. The rapid rate of change projected for the cable industry will ensure the need for perpetual review and revision of regulatory decisions.

The Effects of Cost-of-Service Regulation on Costs

The primary goal of cost-of-service regulation is to prevent regulated firms from earning excess profits at the expense of consumers. Thus, regulators seek to link a "reasonable" profit level to prices that are charged for products or services. This involves considering all the costs of the regulated firms and structuring prices so that firms will have an opportunity to earn an appropriate competitive risk-adjusted return on capital.

However, this entire effort is based on the erroneous presumption that forcing profits toward competitive levels and prices toward costs will result in mimicking competitive behavior. In fact, regulation gives rise to incentives for inefficient behavior.

Specifically, cost-of-service regulation dampens the incentives for the firm to minimize costs and tolerates new costs that arise from inefficient expenditures, to the extent that costs can simply be passed on to consumers.[23] In addition to passively

[23]H. Demsetz, "Minorities in the Marketplace," in Ownership, Control, and the Firm (Cambridge, MA: Basil Blackwell, 1988), p. 89. When owners of firms face regulatory constraints on profit-

engaging in inefficient behavior, firms will have incentives to incur capital expenditures that are higher than those of an unconstrained profit-maximizing firm. Because profit is ultimately tied to the capital base of regulated firms, the level of profits can be increased by using more capital and less of other inputs so long as the allowed return is greater than the true cost of capital.[24] The inefficiencies introduced by regulation result in wasted resources, and they introduce a distortion of their own because regulators link prices to artificially high costs of service.

Cost-of-Service Regulation Slows Innovation

Because the past decade of growth in the cable industry has been marked by the development of a wide variety of cable programming services, the innovation-dampening effects of cost-of-service regulation may generate substantial consumer harm. Moreover, these adverse effects will deepen over time as industry evolution responds to regulatory incentives instead of consumer demands.

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maximization, they will attempt to derive utility from the firm in other forms, such as larger office spaces or more employees.

[24]H. Averch and L.L. Johnson, "Behavior of the Firm Under Regulatory Constraint," American Economic Review, 1963, pp. 1052-69.

Innovative activity may be slowed because the returns to innovative activity are truncated.[25] Some profitable innovations will be less attractive, and risky projects with possible high payoffs may not be pursued, when the profits from successful innovations must be surrendered to consumers under cost-of-service regulation. Firms, including cable systems, evaluate projects by considering the payoffs of successful and unsuccessful outcomes, weighted by the likelihood of realizing each outcome. Projects with uncertain outcomes will be undertaken if the return from a successful outcome is high enough to cover the costs of the project, including compensation for the project's riskiness. Undertaking such projects serves consumer interests.

When regulation limits the profits a firm may realize from innovative activity, it lowers the expected return of the project. Thus, some projects that would benefit consumers will be rejected under cost-of-service regulation.[26]

Thus, the kinds of service and technological changes that have characterized recent cable history, and have advanced the interests of consumers, are likely to be diminished as a result of the

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[25]P. Joskow and N. Rose, "The Effects of Economic Regulation," in Handbook of Industrial Organization, Volume II (New York: North-Holland, 1989), pp. 1482-3.

[26]There is an offset to these effects to the extent that regulated firms also can pass on to consumers in higher prices the costs of research and development for innovations that would have turned out to be unprofitable for an unregulated firm. Regulated firms, however, may not able to pass on all such losses. Market forces may constrain prices so that such costs cannot be recovered, or regulators may be reluctant to allow the necessary price increases.

elimination of the opportunity to earn a high return from experimenting with new programming services or with new distribution technologies. Under regulation, improvements in the quality of service may no longer translate into increased profits for operators or programmers. Therefore, there is reason to expect that cost-of-service regulation will lead to a narrower array of services of lower quality than otherwise would be offered.

Further, the administrative costs of introducing new services in a regulated environment, which involve detailed cost-justification and verification that the allowed return will not be exceeded, will discourage and slow the introduction of new services and equipment. The regulatory delay involved pushes the revenue stream from new sales farther into the future, reducing their net present value and making their introduction less likely.

In addition, resources will be diverted from designing and producing new services toward resolving regulatory disputes.[27] Moreover, profit constraints themselves will dampen incentives to introduce services or quality improvements that an unregulated firm would develop. Ultimately, this kind of regulation will harm consumers by denying them the opportunity to purchase a higher-quality cable service.

## THE BENEFITS OF BENCHMARK REGULATION FOR BASIC CABLE SERVICE RATES

This section compares the incentives of cable operators under

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[27]B.M. Owen and S. Wildman, Video Economics (Boston: Harvard University Press, 1992), p. 253.

benchmark regulation to the incentives under cost-based and rate-of-return regulatory schemes. A firm has an incentive to behave more efficiently under benchmark regulation because the benchmarks are not tied to the firm's own costs.

The elimination of two major adverse incentives under cost-based and rate-of-return regulation is evident in two behavioral predictions associated with benchmark regulation. First, under benchmark regulation, firms have an incentive to minimize their costs because they are able to retain cost savings as additional profits. This compares favorably to cost-of-service regulation where there is an incentive for the regulated firm to inflate its costs.

Second, because correctly-implemented benchmarks are tied to factors beyond the control of the regulated firm, and not to its own costs, regulated firms have incentives to innovate and to offer desired new services if the costs of the innovation do not exceed the benchmark rate. This contrasts favorably to cost-of-service regulation where these incentives are substantially attenuated. At the same time, it is important to note that the strength of these incentives depends importantly on the levels at which the benchmarks are set.

Efficiency Benefits of Benchmark Regulation

Benchmark regulation avoids many of the adverse incentives of cost-based regulation and enhances the welfare of the consumers because it avoids the lock-step relationship between a firm's own

costs and the prices it can charge, which characterizes cost-of-service regulation. While prices are still constrained, a firm can increase its profits by lowering its costs. Furthermore, because the benchmark is set independently of a firm's own costs, firms have no incentive to attempt to influence the benchmark through their expenditures on costs and their capital investments.

By contrast, under cost-of-service regulation, the benefits from cost-savings will be transferred to consumers as regulators adjust prices to constrain the firms' profits to the allowable rate of return. Thus, cost-based regulation gives firms only limited incentives to minimize production costs.[28] The outcome under benchmark regulation more closely approximates behavior in a competitive market.

Similarly, under benchmark regulation, firms have no incentive to make the inefficient capital investments that they may make under cost-based and rate-of-return regulation. Under benchmark regulation, the incentive to overinvest in capital is eliminated because prices do not vary with the firm's earned return. This leads to a more efficient allocation of resources than is observed under rate-of-return regulation.

For similar reasons, benchmark regulation also encourages efficient innovation. In contrast to rate-of-return regulation, profits are not capped under benchmark regulation, so firms have an

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[28]To the extent there is regulatory lag and firms can retain cost-savings until a future reevaluation of the rate structure, rate-of-return and other cost-based regulatory schemes will encourage some cost-reducing behavior.

incentive to introduce new services and cost-saving technologies that will increase profits. Responding to these incentives will increase consumer well-being and lead to an efficient use of resources.

The level of the benchmark does, however, have important effects on the incentives to offer new and innovative services. Our later discussion of the regulation of rates for cable program services emphasizes the benefits of giving cable systems substantial flexibility in setting prices for these services. Here, it is important to note that, even if more stringent benchmark regulation is applied to basic cable service, it is important that the benchmark not be set so stringently that it discourages operators from maintaining the attractiveness of basic service.

Finally, the administrative burden of benchmark regulation is less onerous than that under cost-of-service regulation.[29] This is so for two basic reasons. First, there will be fewer regulatory proceedings, since separate cost studies are not required for each regulated firm. Second, any regulatory proceedings that are undertaken are likely to be less complex than under cost-of-service regulation because they do not require detailed analysis of each regulated firm's costs. The resulting administrative cost savings, both for regulators and regulated firms, are thus likely to be very large.

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[29]"Report and Order and Second Further Notice of Proposed Rulemaking," FCC, CC Docket No. 87-313, April 17, 1989, p. 2925.

Adjusting the Benchmark over Time

Over time, the competitive benchmark for basic cable service could be adjusted because of increased costs for providing the same quality of basic service, or to create incentives for systems to offer higher-quality basic service. While there are a number of alternative ways in which these adjustments might be accomplished, none is without its problems.[30] However, one key principle is that the adjustment method should not be made to depend upon costs within the cable operator's control. If the benchmarks are revised simply because operators are earning what the Commission regards as excess profits, then such revisions would tend to transform the benchmark approach into traditional cost-of-service regulation, complete with all of the associated distorted incentives.

One obvious alternative is to permit rate increases that are comparable to those for cable systems that satisfy Congress' definition of systems subject to effective competition. However, if relatively few systems satisfy this criterion, or if these systems have characteristics that are very different from other systems[31], there is some risk that the extrapolation would be inaccurate.

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[30]Regardless of the approach taken, the Commission will always have only an estimate of what the adjustment of the competitive benchmark should be for any particular system. As discussed above, to limit the extent to which operators are discouraged from adding services to the basic tier, the Commission should consider setting the allowable adjustment at some level above its "best" estimate.

[31]These same factors could also affect the usefulness of the rates for these systems in setting the original benchmark.

An alternative is for the Commission to simply restrict permissible changes in a system's benchmark per-channel rate to a figure no greater than the increase in the Consumer Price Index. One difficulty, however, is that this index is so broad in terms of the products included and its geographic scope that it could very easily overstate or understate the "true" increases in costs for many cable systems.

One way to mitigate this effect is to rely on regional CPI indices for services compiled by the Labor Department's Bureau of Labor statistics, which are similar to the index described in the Notice. In addition, the Commission could permit automatic pass-throughs of certain types of costs to the operator, such as increased programming costs, including retransmission consent costs.

Alternatively, one could construct a new index consisting of the programming cost component and other costs. For example, one could calculate the increase in the index as the [increase in the programming costs (less the increase in the CPI) weighted by the last quarter's (or last year's) ratio of programming costs to total operating costs] plus the CPI increase.

One advantage of such cost pass-throughs is that, in comparison to an adjustment based on the CPI alone, they reduce the operator's disincentive to enhance its basic service offerings as costs rise.[32] However, if the Commission were to base the

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[32]As noted above, these effects depend on the initial level of the benchmark for basic service as well as on allowed increases.

programming cost pass-through on the operator's own programming costs, the operator would have a reduced incentive to drive a hard bargain with programmers. To mitigate this effect, the Commission should consider relying on more exogenous measures of programming cost increases.

A third way to adjust the benchmark over time is to tie each system's permitted increases in the benchmark rate to increases in the per-channel total costs of systems not owned by the particular MSO. Given the cost-reduction incentives created for cable operators by the benchmark approach, such an approach would permit the cable operator to increase its rates in response to those per-channel costs that are beyond its own control.

One potentially attractive feature of this approach is that each cable system would have an incentive to keep its costs from increasing as rapidly as that of other systems because it could keep the difference between the actual cost increases and the allowed rise in the benchmark rate. Because each system will be "competing" in this way, eventually the per-channel price of cable will approach its unit costs.[33] The major disadvantage of this approach is that it requires information on the unit per-channel costs from at least a sample of cable systems. Finally, the Commission could adjust the benchmark over time using some average of these approaches.

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[33]For a discussion of a similar proposal, see R. Noll and F.R. Warren-Boulton, "Regulation and the Partially Monopolized Network." Paper presented at a Conference on Policy Approaches to the Deregulation of Network Industries, American Enterprise Institute, October 1990.

Because the mechanisms used to adjust the benchmark over time are only approximate, there are at least two potential problems. First, there may be some systems whose per-channel total costs have increased more rapidly than the average for all systems. Such systems should be allowed the opportunity to convince the Commission that, in fact, the system is atypical, but we would expect such adjustments to be unusual.

Second, the benchmark approach discourages operators from implementing any quality improvements on the basic tier whose per-channel cost exceeds the per-channel benchmark. The Commission can avoid this problem, and encourage the carriage of new services, by adopting the "safety valve" approach discussed below.

REGULATION OF RATES FOR EQUIPMENT USED TO RECEIVE BASIC SERVICE

As noted earlier, the fact that some cable systems currently bundle services and equipment in their rates and others do not requires that the benchmark the Commission finally chooses should be applied to the "average revenue" per channel less the regulated costs of equipment for both kinds of systems. Indeed, depending on the benchmark selected, this kind of recalculation may be necessary to estimate for some systems what rates are acceptable under the new rules. Thus, estimation of the costs of installation and equipment is a necessary first step in the oversight not only of rates for equipment and installation but of basic service rates as well.